

AMENDMENTS TO THE CLAIMS

The following listing of claims will replace all prior versions and listings of claims in the application.

LISTING OF CLAIMS

1. (Previously Amended) In a pilot poppet type pressure control valve which includes a main poppet which has a boundary between a high pressure chamber and a back pressure chamber, is elastically supported by a second elastic member, reciprocates based on an interrelationship between a pressure of the back pressure chamber with respect to the pressure of the high pressure chamber and an elastic force of a second elastic member for thereby opening and closing a discharging flow path of the high pressure chamber, and a pilot poppet which is elastically supported by at the first elastic member in the discharging port of the back pressure chamber, reciprocates based on an interrelationship between a pressure of the back pressure chamber and an elastic force of the first elastic member and opens and closes the discharging port of the back pressure chamber wherein the pilot poppet seals the discharging port of the back pressure chamber by a supporting force of the first elastic member when the pressure of the high pressure chamber is below a set pressure level, and the discharging flow path of the high pressure chamber is closed by the main poppet to which the back pressure of the back pressure chamber is applied, and the pilot poppet opens the discharging flow path of the high pressure chamber to the main poppet to which the pressure of the high pressure chamber is applied as the pilot poppet opens the discharging port by the pressure of the high pressure chamber when the pressure of the high pressure chamber exceeds a set pressure level, an improved pilot poppet type 19

pressure control valve in which the discharging port of the back pressure chamber which is opened and closed by the pilot poppet has an inner arcuately shaped surface having an inner diameter which is gradually increased in the downstream direction and that contacts a linear surface of the pilot poppet when the back pressure chamber is closed.

2. (Previously Cancelled)

3. (Previously Amended) The valve of claim 1, wherein said pilot poppet is closely contacted with an inner surface of the discharging port for thereby sealing the discharging port as a sealing portion including the linear surface which has an outer diameter gradually increased.

4. (Original) The valve of claim 1, further comprising a piston which reciprocates in the main poppet in a forward and backward direction, is elastically supported by a second elastic member together with the main poppet and opens the pilot poppet when the piston is backwardly moved by a pressure of the high pressure chamber.

5. (Original) The valve of claim 4, wherein said piston includes an orifice formed in the interior of the piston for guiding a fluid of the high pressure chamber to the back pressure chamber.

Attachment

Examiner agreed with Attorney Schively that claim 1 recites the limitations pertaining to arcuately shaped inner surface of the discharge port and a linear surface of the poppet that contacts it. Examiner informed that the ASAOKA reference teaches all the limitations except for the inner arcuately shaped surface of the discharge port and that teaching and motivation is provided in GRANT. Attorney Schively argued that GRANT teaches both the surface of the poppet and the discharge port surface to be curved and that it is improper to take only part of the teaching that pertains to the discharge port and not the arcuate surface of the poppet. Examiner disagreed and mentioned that ASAOKA discloses a linear poppet surface and it is only the teaching pertaining to the discharge port that is of relevance here. Examiner also pointed out that at line 19 of claim 1, the use of the phrase "the improved pilot poppet type" suggests a Jepson type of format and thus presumably making the rest of the claim 1 from lines 1 to 19 admitted prior art. Attorney Schively agreed to take this issue into consideration in filing a response in due course.